

GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 3, 2005, 14:14:30 ; Search time 39 Seconds

(without alignments)
404.710 Million cell updates/sec

Title: US-09-967-301-2-COPY

Perfect score: 1263

Sequence: 1 MSKGEELFTGVVILVELDGVNGHGFVSSEGEEDATYGLTKLFICTTGKLPVPWPTL 238

Scoring table: BLOSUM62DX

Gapop 10.0 , Gapext 0.5

Searched: 478139 seqs, 66318000 residues

Total number of hits satisfying chosen parameters: 478139

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:*

- 1: /cgn2_6/ptodata/1/1aa/5A-COMB.pep.*
- 2: /cgn2_6/ptodata/1/1aa/5B-COMB.pep.*
- 3: /cgn2_6/ptodata/1/1aa/5A-COMB.pep.*
- 4: /cgn2_6/ptodata/1/1aa/6B-COMB.pep.*
- 5: /cgn2_6/ptodata/1/1aa/PCTUS-COMB.pep.*
- 6: /cgn2_6/ptodata/1/1aa/backfiles1.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|----------------------|--------------------|
| 1 | 1263 | 100.0 | 238 | 1 US-08-753-143-2 | Sequence 2, Appli |
| 2 | 1263 | 100.0 | 238 | 2 US-08-679-865-2 | Sequence 2, Appli |
| 3 | 1263 | 100.0 | 238 | 2 US-08-680-876-2 | Sequence 2, Appli |
| 4 | 1263 | 100.0 | 238 | 2 US-08-792-553-2 | Sequence 2, Appli |
| 5 | 1263 | 100.0 | 238 | 3 US-08-753-144-2 | Sequence 2, Appli |
| 6 | 1263 | 100.0 | 238 | 3 US-09-094-359-2 | Sequence 2, Appli |
| 7 | 1263 | 100.0 | 238 | 3 US-09-172-063-2 | Sequence 2, Appli |
| 8 | 1263 | 100.0 | 238 | 3 US-09-263-975-2 | Sequence 2, Appli |
| 9 | 1263 | 100.0 | 238 | 3 US-08-727-452-2 | Sequence 2, Appli |
| 10 | 1263 | 100.0 | 238 | 3 US-09-418-785-1 | Sequence 1, Appli |
| 11 | 1263 | 100.0 | 238 | 4 US-09-129-192C-2 | Sequence 2, Appli |
| 12 | 1263 | 100.0 | 238 | 4 US-09-129-192C-74 | Sequence 74, Appli |
| 13 | 1263 | 100.0 | 238 | 4 US-09-602-641-2 | Sequence 2, Appli |
| 14 | 1263 | 100.0 | 238 | 4 US-09-704-463-2 | Sequence 2, Appli |
| 15 | 1259 | 99.7 | 238 | 1 US-08-337-915A-2 | Sequence 2, Appli |
| 16 | 1259 | 99.7 | 238 | 3 US-09-121-539-1 | Sequence 1, Appli |
| 17 | 1259 | 99.7 | 238 | 4 US-09-214-909-2 | Sequence 2, Appli |
| 18 | 1259 | 99.7 | 238 | 4 US-09-479-645A-10 | Sequence 10, Appli |
| 19 | 1259 | 99.7 | 238 | 4 US-09-479-645A-159 | Sequence 159, App |
| 20 | 1259 | 99.7 | 238 | 4 US-09-472-065A-4 | Sequence 4, Appli |
| 21 | 1259 | 99.7 | 238 | 4 US-09-920-922-4 | Sequence 4, Appli |
| 22 | 1259 | 99.7 | 238 | 5 PCT-US95-14692-2 | Sequence 2, Appli |
| 23 | 1258 | 99.6 | 238 | 4 US-09-023-946B-35 | Sequence 35, Appl |
| 24 | 1258 | 99.6 | 239 | 3 US-08-646-538-2 | Sequence 2, Appli |
| 25 | 1258 | 99.6 | 239 | 3 US-09-503-222-2 | Sequence 2, Appli |
| 26 | 1256 | 99.4 | 238 | 3 US-08-893-327-16 | Sequence 16, Appl |
| 27 | 1256 | 99.4 | 238 | 4 US-09-472-065A-2 | Sequence 2, Appli |

ALIGNMENTS

RESULT 1

US-08-753-143-2
; Sequence 2, Application US/08753143A
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Heim, Roger
; TITLE OF INVENTION: MODIFIED GREEN FLUORESCENT PROTEINS
; FILE REFERENCE: 07257/032003
; CURRENT APPLICATION NUMBER: US/08/753.143A
; CURRENT FILING DATE: 1996-11-20
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
US-08-753-143-2

Query Match 100.0%; Score 1263; DB 1; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

| | | | |
|----|-----|--|-----|
| Qy | 1 | MSKGEELFTGVVILVELDGVNGHGFVSSEGEEDATYGLTKLFICTTGKLPVPWPTL | 60 |
| Db | 1 | MSKGEELFTGVVILVELDGVNGHGFVSSEGEEDATYGLTKLFICTTGKLPVPWPTL | 60 |
| Qy | 61 | VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGVQVQERTIFFKDDGNYKTRAEVKEGDTLV | 120 |
| Db | 61 | VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGVQVQERTIFFKDDGNYKTRAEVKEGDTLV | 120 |
| Qy | 121 | NRIELKGIDFKEDGNILGHKLKYVNNHVNIVIMADKQKNGIKVNFKIRHNIEDGKVQLAD | 180 |
| Db | 121 | NRIELKGIDFKEDGNILGHKLKYVNNHVNIVIMADKQKNGIKVNFKIRHNIEDGKVQLAD | 180 |
| Qy | 181 | HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLLVLFVTAAGITHGMDELYK | 238 |
| Db | 181 | HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLLVLFVTAAGITHGMDELYK | 238 |

RESULT 2

US-08-679-865-2
; Sequence 2, Application US/08679865
; Patent No. 5912137
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Cubitt, Andrew B.
; TITLE OF INVENTION: Assays for Protein Kinases Using
; TITLE OF INVENTION: Fluorescent Protein Substrates
; NUMBER OF SEQUENCES: 48
; CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94111-3834

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/679,865
FILING DATE: 16-JUL-1996

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
NAME: Storella, John S.
REGISTRATION NUMBER: 32,944
REFERENCE/DOCKET NUMBER: 02307Z-069000

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 238 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-679-865-2

Query Match 100.0%; Score 1263; DB 2; Length 238;

Best Local Similarity 98.7%; Pred. No. 2.3e-123; Indels 0; Gaps 0;
Matches 235; Conservative 3; Mismatches 0;

Qy 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDATYKLTLLKFKICTTGKLPVWPPTL 60

Db 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDATYKLTLLKFKICTTGKLPVWPPTL 60

Qy 61 VTTYSYGVQCFSPYDPHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120

Db 61 VTTFSYGVQCFSPYDPHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120

Qy 121 NRLEKGDIFDKEDGNILGHKLEYNVNSHNVIYIMADKQKGIKVNFKIRHNIEDGKVLAD 180

Db 121 NRLEKGDIFDKEDGNILGHKLEYNVNSHNVIYIMADKQKGIKVNFKIRHNIEDGKVLAD 180

Qy 181 HYQNTPTIGDGPVLLPDNHYLSTQSALSQKDPNEKRDHMLVLLXFTVTAAGITHGMDLYK 238

Db 181 HYQNTPTIGDGPVLLPDNHYLSTQSALSQKDPNEKRDHMLVLLXFTVTAAGITHGMDLYK 238

RESULT 3

US-08-680-876-2

Sequence 2, Application US/08680876

Patent No. 5925558

GENERAL INFORMATION:

APPLICANT: Tsien, Roger Y.

APPLICANT: Cubitt, Andrew B.

TITLE OF INVENTION: Assays for Protein Kinases Using

TITLE OF INVENTION: Fluorescent Protein Substrates

NUMBER OF SEQUENCES: 48

CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew LLP

STREET: Two Embarcadero Center, Eighth Floor

CITY: San Francisco

STATE: California

COUNTRY: USA

ZIP: 94111-3834

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/680,876
FILING DATE: 16-JUL-1996

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Storella, John S.

REGISTRATION NUMBER: 32,944

REFERENCE/DOCKET NUMBER: 02307Z-069200

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 576-0200

TELEFAX: (415) 576-0300

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 238 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-680-876-2

Query Match 100.0%; Score 1263; DB 2; Length 238;

Best Local Similarity 98.7%; Pred. No. 2.3e-123;

Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDATYKLTLLKFKICTTGKLPVWPPTL 60

Db 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDATYKLTLLKFKICTTGKLPVWPPTL 60

Qy 61 VTTYSYGVQCFSPYDPHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120

Db 61 VTTFSYGVQCFSPYDPHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120

Qy 121 NRLEKGDIFDKEDGNILGHKLEYNVNSHNVIYIMADKQKGIKVNFKIRHNIEDGKVLAD 180

Db 121 NRLEKGDIFDKEDGNILGHKLEYNVNSHNVIYIMADKQKGIKVNFKIRHNIEDGKVLAD 180

Qy 181 HYQNTPTIGDGPVLLPDNHYLSTQSALSQKDPNEKRDHMLVLLXFTVTAAGITHGMDLYK 238

Db 181 HYQNTPTIGDGPVLLPDNHYLSTQSALSQKDPNEKRDHMLVLLXFTVTAAGITHGMDLYK 238

RESULT 4

US-08-792-553-2

Sequence 2, Application US/08792553

Patent No. 5981200

GENERAL INFORMATION:

APPLICANT: Tsien, Roger Y.

APPLICANT: Heim, Roger

TITLE OF INVENTION: Tandem Fluorescent Protein Constructs

NUMBER OF SEQUENCES: 25

CORRESPONDENCE ADDRESS:

ADDRESSEE: FISH & RICHARDSON P.C.

STREET: 4225 Executive Square, Suite 1400

CITY: La Jolla

STATE: California

COUNTRY: USA

ZIP: 92037

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/792,553

FILING DATE: 31-JAN-1997

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Lisa A. Haile, Ph.D.

REGISTRATION NUMBER: 38,347

REFERENCE/DOCKET NUMBER: 07257/041001/UC 96-160-2

TELECOMMUNICATION INFORMATION:

TELEPHONE: 619-678-5070

TELEFAX: 619-678-5099

INFORMATION FOR SEQ ID NO: 2:

```

; SEQUENCE CHARACTERISTICS:
; LENGTH: 238 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-792-553-2

Query Match 100.0%; Score 1263; DB 2; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGGDATYGLTKLTKFKICTTGKLPVPWPPTL 60
DB 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGGDATYGLTKLTKFKICTTGKLPVPWPPTL 60

QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAAMPEGYVQERTIFFKDDGNYKTRAEVKPEGDTLV 120
DB 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAAMPEGYVQERTIFFKDDGNYKTRAEVKPEGDTLV 120

QY 121 NRLEKGIIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGKVLQAD 180
DB 121 NRLEKGIIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGKVLQAD 180

QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLX FVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLX FVTAAGITHGMDELYK 238

RESULT 5
US-08-753-144-2
; Sequence 2, Application US/08753144
; Patent No. 6066476
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Heim, Roger
; TITLE OF INVENTION: MODIFIED GREEN FLUORESCENT PROTEINS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: USA
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows95
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/753,144
; FILING DATE: 20-NOV-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/727,452
; FILING DATE: 10-OCT-1996
; APPLICATION NUMBER: US95/14692
; FILING DATE: 13-NOV-1995
; APPLICATION NUMBER: 08/337,915
; FILING DATE: 10-NOV-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Haile, Lisa A.
; REGISTRATION NUMBER: 38,347
; REFERENCE/DOCKET NUMBER: 07257/032002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619/678-5070
; TELEFAX: 619/678-5099
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 238 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FRAGMENT TYPE: internal

```

```

US-08-753-144-2

Query Match 100.0%; Score 1263; DB 3; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGGDATYGLTKLTKFKICTTGKLPVPWPPTL 60
DB 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGGDATYGLTKLTKFKICTTGKLPVPWPPTL 60

QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAAMPEGYVQERTIFFKDDGNYKTRAEVKPEGDTLV 120
DB 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAAMPEGYVQERTIFFKDDGNYKTRAEVKPEGDTLV 120

QY 121 NRLEKGIIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGKVLQAD 180
DB 121 NRLEKGIIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGKVLQAD 180

QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLX FVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLX FVTAAGITHGMDELYK 238

RESULT 6
US-09-094-359-2
; Sequence 2, Application US/09094359
; Patent No. 6140132
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; APPLICANT: Llopis, Juan
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; TITLE OF INVENTION: MEASURING THE PH OF A BIOLOGICAL SAMPLE
; FILE REFERENCE: 07257/067001
; CURRENT APPLICATION NUMBER: US/09/094,359
; CURRENT FILING DATE: 1998-06-09
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
US-09-094-359-2

Query Match 100.0%; Score 1263; DB 3; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGGDATYGLTKLTKFKICTTGKLPVPWPPTL 60
DB 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGGDATYGLTKLTKFKICTTGKLPVPWPPTL 60

QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAAMPEGYVQERTIFFKDDGNYKTRAEVKPEGDTLV 120
DB 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAAMPEGYVQERTIFFKDDGNYKTRAEVKPEGDTLV 120

QY 121 NRLEKGIIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGKVLQAD 180
DB 121 NRLEKGIIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGKVLQAD 180

QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLX FVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLX FVTAAGITHGMDELYK 238

RESULT 7
US-09-172-063-2
; Sequence 2, Application US/09172063
; Patent No. 6150176
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; APPLICANT: Llopis, Juan

```

APPLICANT: Wachter, Rebekka M.
APPLICANT: Remington, S. James
TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
TITLE OF INVENTION: MEASURING THE PH OF A BIOLOGICAL SAMPLE
FILE REFERENCE: 07257/071001
CURRENT APPLICATION NUMBER: US/09/172.063
CURRENT FILING DATE: 1998-10-13
EARLIER APPLICATION NUMBER: 09/094,359
EARLIER FILING DATE: 1998-06-09
NUMBER OF SEQ ID NOS: 38
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 238
TYPE: PRT
ORGANISM: Aequorea victoria
US-09-172-063-2

Query Match 100.0%; Score 1263; DB 3; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
QY 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGDATYGLTKLFTCTTGKLPVPWPTL 60
DB 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGDATYGLTKLFTCTTGKLPVPWPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQKNGIKVNFKIRHNIEDGSVQLAD 180
DB 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQKNGIKVNFKIRHNIEDGSVQLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238

RESULT 8

US-09-263-975-2
Sequence 2, Application US/09263975
Patent No. 6248550
GENERAL INFORMATION:
APPLICANT: Tsien, Roger Y.
APPLICANT: Cubitt, Andrew B.
TITLE OF INVENTION: Assays for Protein Kinases Using
TITLE OF INVENTION: Fluorescent Protein Substrates
NUMBER OF SEQUENCES: 48
CORRESPONDENCE ADDRESS:
ADDRESS: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94111-3834
COMPUTER READABLE FORM:
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/263,975
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/679,865
FILING DATE: 16-JUL-1996
ATTORNEY/AGENT INFORMATION:
NAME: Storella, John S.
REGISTRATION NUMBER: 32,944
REFERENCE/DOCKET NUMBER: 02307Z-069000
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200

TELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 238 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-263-975-2

Query Match 100.0%; Score 1263; DB 3; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
QY 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGDATYGLTKLFTCTTGKLPVPWPTL 60
DB 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGDATYGLTKLFTCTTGKLPVPWPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQKNGIKVNFKIRHNIEDGSVQLAD 180
DB 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQKNGIKVNFKIRHNIEDGSVQLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238

RESULT 9

US-08-727-452-2
Sequence 2, Application US/08727452A
Patent No. 6319669
GENERAL INFORMATION:
APPLICANT: Tsien, Roger Y.
APPLICANT: Heim, Roger
TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR DETECTION OF ANALYTES
FILE REFERENCE: 07257/032001
CURRENT APPLICATION NUMBER: US/08/727,452A
CURRENT FILING DATE: 1996-03-20
EARLIER APPLICATION NUMBER: PCT/US95/14692
EARLIER FILING DATE: 1995-11-13
EARLIER APPLICATION NUMBER: US 07/337,915
EARLIER FILING DATE: 1994-11-10
NUMBER OF SEQ ID NOS: 5
SOFTWARE: FastSeq for Windows Version 3.0
SEQ ID NO 2
LENGTH: 238
TYPE: PRT
ORGANISM: Aequorea victoria
US-08-727-452-2

Query Match 100.0%; Score 1263; DB 3; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
QY 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGDATYGLTKLFTCTTGKLPVPWPTL 60
DB 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGDATYGLTKLFTCTTGKLPVPWPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQKNGIKVNFKIRHNIEDGSVQLAD 180
DB 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQKNGIKVNFKIRHNIEDGSVQLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238

RESULT 10

US-09-418-785-1
; Sequence 1, Application US/09418785
; Patent No. 6414119
; GENERAL INFORMATION:
; APPLICANT: Fisher, Hugh
; TITLE OF INVENTION: Rapidly Greening, Low Oxygen Mutant of
; TITLE OF INVENTION: the Aequorea victoria Green Fluorescent Protein
; FILE REFERENCE: RUC 99-0011
; CURRENT APPLICATION NUMBER: US/09/418,785
; CURRENT FILING DATE: 1999-10-15
; PRIOR APPLICATION NUMBER: 60/104,563
; PRIOR FILING DATE: 1998-10-16
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
; PUBLICATION INFORMATION:
; AUTHORS: Prasher, D.C. et al.
; TITLE: Primary structure of the Aequorea victoria green-f
; JOURNAL: Gene
; VOLUME: 111
; PAGES: 229-233
; DATE: 1992-01-01
; DATABASE ACCESSION NUMBER: Genbank M62653
; DATABASE ENTRY DATE: 1993-04-26
US-09-418-785-1

Query Match 100.0%; Score 1263; DB 4; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGDATYGKLTCLKFKICTTCKLPVWPPTL 60
Db 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGDATYGKLTCLKFKICTTCKLPVWPPTL 60
Qy 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Db 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Qy 121 NRIELKGIDFKEDGNILGHKLEYNNSHNYIMADKQNGIKVNFKIRHNIEDGKVLAD 180
Db 121 NRIELKGIDFKEDGNILGHKLEYNNSHNYIMADKQNGIKVNFKIRHNIEDGKVLAD 180
Qy 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238
Db 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238

RESULT 11

US-09-129-192C-2
; Sequence 2, Application US/09129192C
; Patent No. 6495664
; GENERAL INFORMATION:
; APPLICANT: Aurora Biosciences Corporation
; APPLICANT: Cubitt, Andrew B.
; TITLE OF INVENTION: Fluorescent Protein Sensors of Post-Translational Modifications
; FILE REFERENCE: AURO1270 (08366/031001)
; CURRENT APPLICATION NUMBER: US/09/129,192C
; CURRENT FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea
US-09-129-192C-2
Query Match 100.0%; Score 1263; DB 4; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;

Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGDATYGKLTCLKFKICTTCKLPVWPPTL 60
Db 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGDATYGKLTCLKFKICTTCKLPVWPPTL 60
Qy 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Db 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Qy 121 NRIELKGIDFKEDGNILGHKLEYNNSHNYIMADKQNGIKVNFKIRHNIEDGKVLAD 180
Db 121 NRIELKGIDFKEDGNILGHKLEYNNSHNYIMADKQNGIKVNFKIRHNIEDGKVLAD 180
Qy 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238
Db 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238

RESULT 12

US-09-129-192C-74
; Sequence 74, Application US/09129192C
; Patent No. 6495664
; GENERAL INFORMATION:
; APPLICANT: Aurora Biosciences Corporation
; APPLICANT: Cubitt, Andrew B.
; TITLE OF INVENTION: Fluorescent Protein Sensors of Post-Translational Modifications
; FILE REFERENCE: AURO1270 (08366/031001)
; CURRENT APPLICATION NUMBER: US/09/129,192C
; CURRENT FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 74
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea green fluorescent protein phosphorylation mutant
US-09-129-192C-74

Query Match 100.0%; Score 1263; DB 4; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGDATYGKLTCLKFKICTTCKLPVWPPTL 60
Db 1 MSKGEELFTGVVPIVLVELDGVNGHKFSVSGEGDATYGKLTCLKFKICTTCKLPVWPPTL 60
Qy 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Db 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Qy 121 NRIELKGIDFKEDGNILGHKLEYNNSHNYIMADKQNGIKVNFKIRHNIEDGKVLAD 180
Db 121 NRIELKGIDFKEDGNILGHKLEYNNSHNYIMADKQNGIKVNFKIRHNIEDGKVLAD 180
Qy 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238
Db 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238

RESULT 13

US-09-602-641-2
; Sequence 2, Application US/09602641
; Patent No. 6608189
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; APPLICANT: Liopis, Juan
; APPLICANT: Wachter, Rebekka M.
; APPLICANT: Remington, S. James
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; FILE REFERENCE: 07257/071001
; CURRENT APPLICATION NUMBER: US/09/602,641

```
; CURRENT FILING DATE: 2000-06-22
; PRIOR APPLICATION NUMBER: 09/172,063
; PRIOR FILING DATE: 1998-10-13
; NUMBER OF SEQ ID NOS: 38
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
US-09-602-641-2

Query Match      100.0%; Score 1263; DB 4; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGGDATYGLTLKFCITTKGLPVPWPTL 60
Db 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGGDATYGLTLKFCITTKGLPVPWPTL 60

Qy 61 VTTXSYGVQCFSRYPDHMKRHDFFKFSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Db 61 VTTXSYGVQCFSRYPDHMKRHDFFKFSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120

Qy 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGSVOLAD 180
Db 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGSVOLAD 180

Qy 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLFVTAAGITHGMDELYK 238
Db 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLFVTAAGITHGMDELYK 238

RESULT 14
US-09-704-463-2
; Sequence 2, Application US/09704463
; Patent No. 6627449
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; APPLICANT: Llopis, Juan
; TITLE OF INVENTION: MEASURING THE PH OF A BIOLOGICAL SAMPLE
; FILE REFERENCE: 07257/067001
; CURRENT APPLICATION NUMBER: US/09/704,463
; CURRENT FILING DATE: 2000-10-31
; PRIOR APPLICATION NUMBER: 09/094,359
; PRIOR FILING DATE: 1998-06-09
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
US-09-704-463-2

Query Match      100.0%; Score 1263; DB 4; Length 238;
Best Local Similarity 98.7%; Pred. No. 2.3e-123;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGGDATYGLTLKFCITTKGLPVPWPTL 60
Db 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGGDATYGLTLKFCITTKGLPVPWPTL 60

Qy 61 VTTXSYGVQCFSRYPDHMKRHDFFKFSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Db 61 VTTXSYGVQCFSRYPDHMKRHDFFKFSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120

Qy 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGSVOLAD 180
Db 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGSVOLAD 180

Qy 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLFVTAAGITHGMDELYK 238
Db 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLFVTAAGITHGMDELYK 238
```

```
Db 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLFVTAAGITHGMDELYK 238

RESULT 15
US-08-337-915A-2
; Sequence 2, Application US/08337915A
; Patent No. 5625048
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Heim, Roger
; TITLE OF INVENTION: MODIFIED GREEN FLUORESCENT PROTEINS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Robbins, Berliner & Carson
; STREET: 201 No. 5625048th Figueroa Street, Suite 500
; CITY: Los Angeles
; STATE: California
; COUNTRY: USA
; ZIP: 90012
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/337,915A
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Spitals, John P.
; REGISTRATION NUMBER: 29,215
; REFERENCE/DOCKET NUMBER: 1279-178
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 977-1001
; TELEFAX: (213) 977-1003
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 238 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-337-915A-2

Query Match      99.7%; Score 1259; DB 1; Length 238;
Best Local Similarity 98.3%; Pred. No. 6e-123;
Matches 234; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGGDATYGLTLKFCITTKGLPVPWPTL 60
Db 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGGDATYGLTLKFCITTKGLPVPWPTL 60

Qy 61 VTTXSYGVQCFSRYPDHMKRHDFFKFSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
Db 61 VTTXSYGVQCFSRYPDHMKRHDFFKFSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120

Qy 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGSVOLAD 180
Db 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVIYIMADKQNGIKVNFKIRHNIEDGSVOLAD 180

Qy 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLFVTAAGITHGMDELYK 238
Db 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLFVTAAGITHGMDELYK 238

Search completed: January 3, 2005, 14:31:20
Job time : 44 secs
```

GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 3, 2005, 14:27:12 ; Search time 145 Seconds
(without alignments)
590.450 Million cell updates/sec

Title: US-09-967-301-2-COPY

Perfect score: 1263

Sequence: 1 MSKGEELFTGVLPILVDG.....VLLKFTVTAAGITHGMBELYK 238

Scoring table: BLOSUM62DX

Gapop 10.0 , Gapext 0.5

Searched: 1599051 seqs, 359727711 residues

Total number of hits satisfying chosen parameters: 1599051

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database :

Published Applications AA:*

- 1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep.*
- 2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep.*
- 4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep.*
- 5: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep.*
- 6: /cgn2_6/ptodata/2/pubpaa/PCTUS_PUBCOMB.pep.*
- 7: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep.*
- 8: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep.*
- 9: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep.*
- 10: /cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep.*
- 11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep.*
- 12: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep.*
- 13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep.*
- 14: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep.*
- 15: /cgn2_6/ptodata/2/pubpaa/US10C_PUBCOMB.pep.*
- 16: /cgn2_6/ptodata/2/pubpaa/US10D_PUBCOMB.pep.*
- 17: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep.*
- 18: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep.*
- 19: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep.*
- 20: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | ID | Description |
|------------|-------|-------------|--------|----|-------------------|
| 1 | 1263 | 100.0 | 238 | 9 | US-09-884-681-2 |
| 2 | 1263 | 100.0 | 238 | 10 | US-09-967-301-2 |
| 3 | 1263 | 100.0 | 238 | 10 | US-09-967-301-3 |
| 4 | 1263 | 100.0 | 238 | 13 | US-10-024-686-2 |
| 5 | 1263 | 100.0 | 238 | 13 | US-10-057-505-2 |
| 6 | 1263 | 100.0 | 238 | 14 | US-10-293-580-2 |
| 7 | 1263 | 100.0 | 238 | 14 | US-10-293-580-74 |
| 8 | 1263 | 100.0 | 238 | 14 | US-10-457-982-2 |
| 9 | 1263 | 100.0 | 238 | 16 | US-10-724-178-2 |
| 10 | 1263 | 100.0 | 238 | 16 | US-10-757-624-2 |
| 11 | 1263 | 100.0 | 238 | 16 | US-10-757-624-3 |
| 12 | 1263 | 100.0 | 1125 | 17 | US-10-845-936A-34 |
| 13 | 1260 | 99.8 | 238 | 10 | US-09-967-301-4 |

| | | | | | | |
|----|------|------|-----|----|--------------------|--------------------|
| 14 | 1260 | 99.8 | 238 | 16 | US-10-757-624-4 | Sequence 4, Appli |
| 15 | 1259 | 99.7 | 238 | 9 | US-09-920-922-4 | Sequence 4, Appli |
| 16 | 1259 | 99.7 | 238 | 9 | US-09-852-000-1 | Sequence 1, Appli |
| 17 | 1259 | 99.7 | 238 | 10 | US-09-900-345A-125 | Sequence 125, App |
| 18 | 1259 | 99.7 | 238 | 10 | US-09-866-538-2 | Sequence 2, Appli |
| 19 | 1259 | 99.7 | 238 | 10 | US-09-794-308-2 | Sequence 2, Appli |
| 20 | 1259 | 99.7 | 238 | 10 | US-09-865-291-2 | Sequence 10, Appli |
| 21 | 1259 | 99.7 | 238 | 14 | US-10-121-258-10 | Sequence 6, Appli |
| 22 | 1259 | 99.7 | 238 | 14 | US-10-221-461-6 | Sequence 10, Appli |
| 23 | 1259 | 99.7 | 238 | 14 | US-10-305-765-10 | Sequence 159, App |
| 24 | 1259 | 99.7 | 238 | 14 | US-10-305-765-159 | Sequence 10, Appli |
| 25 | 1259 | 99.7 | 238 | 14 | US-10-305-633-10 | Sequence 159, App |
| 26 | 1259 | 99.7 | 238 | 14 | US-10-305-633-159 | Sequence 8, Appli |
| 27 | 1259 | 99.7 | 238 | 14 | US-10-132-067-8 | Sequence 1, Appli |
| 28 | 1259 | 99.7 | 238 | 14 | US-10-370-570-1 | Sequence 53, Appli |
| 29 | 1259 | 99.7 | 238 | 14 | US-10-370-570-53 | Sequence 42, Appli |
| 30 | 1259 | 99.7 | 238 | 15 | US-10-423-688A-42 | Sequence 3, Appli |
| 31 | 1259 | 99.7 | 238 | 15 | US-10-668-168-4 | Sequence 1, Appli |
| 32 | 1259 | 99.7 | 238 | 16 | US-10-333-680-3 | Sequence 35, Appli |
| 33 | 1259 | 99.7 | 238 | 17 | US-10-753-405-1 | Sequence 2, Appli |
| 34 | 1259 | 99.7 | 238 | 17 | US-10-699-113-35 | Sequence 2, Appli |
| 35 | 1259 | 99.7 | 238 | 17 | US-10-845-484-2 | Sequence 2, Appli |
| 36 | 1259 | 99.7 | 238 | 17 | US-10-885-988-2 | Sequence 35, Appli |
| 37 | 1258 | 99.6 | 238 | 16 | US-10-676-428-35 | Sequence 5, Appli |
| 38 | 1256 | 99.4 | 238 | 15 | US-10-668-168-2 | Sequence 6, Appli |
| 39 | 1256 | 99.4 | 238 | 15 | US-10-668-168-5 | Sequence 60, Appli |
| 40 | 1256 | 99.4 | 243 | 10 | US-09-900-345A-60 | Sequence 62, Appli |
| 41 | 1256 | 99.4 | 243 | 10 | US-09-900-345A-62 | Sequence 64, Appli |
| 42 | 1256 | 99.4 | 243 | 10 | US-09-900-345A-64 | Sequence 66, Appli |
| 43 | 1256 | 99.4 | 243 | 10 | US-09-900-345A-66 | Sequence 68, Appli |
| 44 | 1256 | 99.4 | 243 | 10 | US-09-900-345A-68 | |
| 45 | 1256 | 99.4 | 243 | 10 | US-09-900-345A-68 | |

ALIGNMENTS

RESULT 1

US-09-884-681-2
; Sequence 2, Application US/09884681
; Patent No. US20020061546A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; Cubitt, Andrew B.
; TITLE OF INVENTION: Assays for Protein Kinases Using
; Fluorescent Protein Substrates
; NUMBER OF SEQUENCES: 48
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend and Crew LLP
; STREET: Two Embarcadero Center, Eighth Floor
; CITY: San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94111-3834
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/884,681
; FILING DATE: 19-Jun-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/679,865
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Storella, John S.
; REGISTRATION NUMBER: 32,944
; REFERENCE/DOCKET NUMBER: 023072-069000
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300

```
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
;   LENGTH: 238 amino acids
;   TYPE: amino acid
;   TOPOLOGY: linear
;   MOLECULE TYPE: protein
;   SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-884-681-2

Query Match          100.0%; Score 1263; DB 9; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDGYGKLTLPKFTCTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDGYGKLTLPKFTCTTGKLPVWPPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTFSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRIELKGIDPKEDGNILGHKLEYNYNHSHVYIMADKQNGIKVNFKIRHNIEDGVQLAD 180
DB 121 NRIELKGIDPKEDGNILGHKLEYNYNHSHVYIMADKQNGIKVNFKIRHNIEDGVQLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238

RESULT 2
US-09-967-301-2
; Sequence 2, Application US/09967301
; Publication No. US20030175859A1
; GENERAL INFORMATION:
; APPLICANT: Stubbs, Simon L.
; APPLICANT: Jones, Anne E.
; APPLICANT: Michael, Nigel P.
; APPLICANT: Thomas, Nicholas
; TITLE OF INVENTION: Fluorescent Proteins
; FILE REFERENCE: PA0111
; CURRENT APPLICATION NUMBER: US/09/967,301
; PRIOR FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: GB 0109858.1
; PRIOR FILING DATE: 2001-04-23
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; OTHER INFORMATION: protein
US-09-967-301-2

Query Match          100.0%; Score 1263; DB 10; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDGYGKLTLPKFTCTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDGYGKLTLPKFTCTTGKLPVWPPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTLSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRIELKGIDPKEDGNILGHKLEYNYNHSHVYIMADKQNGIKVNFKIRHNIEDGVQLAD 180
DB 121 NRIELKGIDPKEDGNILGHKLEYNYNHSHVYIMADKQNGIKVNFKIRHNIEDGVQLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238

RESULT 4
US-10-024-686-2
; Sequence 2, Application US/10024686
; Publication No. US20020123113A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Heim, Roger
; TITLE OF INVENTION: MODIFIED GREEN FLUORESCENT PROTEINS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSER: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: USA
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows95
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/024,686
; FILING DATE: 17-Dec-2001
; PRIOR APPLICATION DATA:
```

```
RESULT 3
US-09-967-301-3
; Sequence 3, Application US/09967301
; Publication No. US20030175859A1
; GENERAL INFORMATION:
; APPLICANT: Stubbs, Simon L.
; APPLICANT: Jones, Anne E.
; APPLICANT: Michael, Nigel P.
; APPLICANT: Thomas, Nicholas
; TITLE OF INVENTION: Fluorescent Proteins
; FILE REFERENCE: PA0111
; CURRENT APPLICATION NUMBER: US/09/967,301
; PRIOR FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: GB 0109858.1
; PRIOR FILING DATE: 2001-04-23
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; OTHER INFORMATION: protein
US-09-967-301-3

Query Match          100.0%; Score 1263; DB 10; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDGYGKLTLPKFTCTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPIVLVDGVDVNGHKFSVSGEGDGYGKLTLPKFTCTTGKLPVWPPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTLSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRIELKGIDPKEDGNILGHKLEYNYNHSHVYIMADKQNGIKVNFKIRHNIEDGVQLAD 180
DB 121 NRIELKGIDPKEDGNILGHKLEYNYNHSHVYIMADKQNGIKVNFKIRHNIEDGVQLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDHMLVLLXFVTAAGITHGMDELYK 238

RESULT 4
US-10-024-686-2
; Sequence 2, Application US/10024686
; Publication No. US20020123113A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Heim, Roger
; TITLE OF INVENTION: MODIFIED GREEN FLUORESCENT PROTEINS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSER: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: USA
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows95
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/024,686
; FILING DATE: 17-Dec-2001
; PRIOR APPLICATION DATA:
```


APPLICATION NUMBER: 09/057,995
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/727,452
FILING DATE: 10-OCT-1996
APPLICATION NUMBER: US95/14692
FILING DATE: 13-NOV-1995
APPLICATION NUMBER: 08/337,915
FILING DATE: 10-NOV-1994
ATTORNEY/AGENT INFORMATION:
NAME: Hallie, Lisa A.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 07257/032002
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619/678-5070
TELEFAX: 619/678-5039
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 238 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
FRAGMENT TYPE: internal
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-10-024-686-2

Query Match 100.0%; Score 1263; DB 13; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
QY 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGEDATYGLTKLFCITTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGEDATYGLTKLFCITTTGKLPVWPPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTFSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRTELKIDFKEDGNILGHKLEYNYNHNVYIMADKQKNGIKVNFKIRHNIEDGXVOLAD 180
DB 121 NRTELKIDFKEDGNILGHKLEYNYNHNVYIMADKQKNGIKVNFKIRHNIEDGXVOLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238

RESULT 5
US-10-057-505-2
; Sequence 2, Application US/10057505
; Publication No. US20020164674A1
; GENERAL INFORMATION:
; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
; APPLICANT: AURORA BIOSCIENCES CORPORATION
; APPLICANT: TSJEN, Roger
; APPLICANT: HEIM, Roger
; APPLICANT: CUBITT, Andrew
; TITLE OF INVENTION: TANDEM FLUORESCENT PROTEIN CONSTRUCTS
; FILE REFERENCE: REGEN1260-3
; CURRENT APPLICATION NUMBER: US/10/057,505
; CURRENT FILING DATE: 2002-01-25
; PRIOR APPLICATION NUMBER: US 08/792,553
; PRIOR FILING DATE: 1997-01-31
; PRIOR APPLICATION NUMBER: US 09/396,003
; PRIOR FILING DATE: 1999-09-13
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
; US-10-057-505-2
Query Match 100.0%; Score 1263; DB 13; Length 238;

Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
QY 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGEDATYGLTKLFCITTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGEDATYGLTKLFCITTTGKLPVWPPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTFSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRTELKIDFKEDGNILGHKLEYNYNHNVYIMADKQKNGIKVNFKIRHNIEDGXVOLAD 180
DB 121 NRTELKIDFKEDGNILGHKLEYNYNHNVYIMADKQKNGIKVNFKIRHNIEDGXVOLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238

RESULT 6
US-10-293-580-2
; Sequence 2, Application US/10293580
; Publication No. US20030170767A1
; GENERAL INFORMATION:
; APPLICANT: Aurora Biosciences Corporation
; APPLICANT: Cubitt, Andrew B.
; TITLE OF INVENTION: Fluorescent Protein Sensors of Post-Translational Modifications
; FILE REFERENCE: AU01270 (08366/031001)
; CURRENT APPLICATION NUMBER: US/10/293,580
; CURRENT FILING DATE: 2002-11-12
; PRIOR APPLICATION NUMBER: US/09/129,192
; PRIOR FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea
; US-10-293-580-2

Query Match 100.0%; Score 1263; DB 14; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGEDATYGLTKLFCITTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPILVELDGVNKGKFSVSGEGEDATYGLTKLFCITTTGKLPVWPPTL 60
QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTFSYGVQCFSRYPDHMKRHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLV 120
QY 121 NRTELKIDFKEDGNILGHKLEYNYNHNVYIMADKQKNGIKVNFKIRHNIEDGXVOLAD 180
DB 121 NRTELKIDFKEDGNILGHKLEYNYNHNVYIMADKQKNGIKVNFKIRHNIEDGXVOLAD 180
QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALS KDPNEKRDMHVLXFTVTAAGITHGMDELYK 238

RESULT 7
US-10-293-580-74
; Sequence 74, Application US/10293580
; Publication No. US20030170767A1
; GENERAL INFORMATION:
; APPLICANT: Aurora Biosciences Corporation
; APPLICANT: Cubitt, Andrew B.
; TITLE OF INVENTION: Fluorescent Protein Sensors of Post-Translational Modifications
; FILE REFERENCE: AU01270 (08366/031001)
; CURRENT APPLICATION NUMBER: US/10/293,580
; CURRENT FILING DATE: 2002-11-12

```

; PRIOR APPLICATION NUMBER: US/09/129,192
; PRIOR FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent in version 3.0
; SEQ ID NO 74
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea green fluorescent protein phosphorylation mutant
US-10-293-580-74

Query Match      100.0%; Score 1263; DB 14; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGLTKLFICTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGLTKLFICTTGKLPVWPPTL 60

QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGVYQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTFSYGVQCFSRYPDHMKRHDFFKSAPEGVYQERTIFFKDDGNYKTRAEVKFEGDTLV 120

QY 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVYIMADKQNGIKVNFKIRHNIEDGSVQLAD 180
DB 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVYIMADKQNGIKVNFKIRHNIEDGSVQLAD 180

QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238

RESULT 8
US-10-457-982-2
; Sequence 2, Application US/10457982
; Publication No. US20030212265A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; APPLICANT: Llopis, Juan
; APPLICANT: Wächter, Rebekka M.
; APPLICANT: Remington, S. James
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; FILE REFERENCE: MEASURING THE PH OF A BIOLOGICAL SAMPLE
; CURRENT APPLICATION NUMBER: US/10/457,982
; CURRENT FILING DATE: 2003-06-09
; PRIOR APPLICATION NUMBER: US/09/602,641
; PRIOR FILING DATE: 2000-06-22
; PRIOR APPLICATION NUMBER: 09/172,063
; PRIOR FILING DATE: 1998-10-13
; NUMBER OF SEQ ID NOS: 38
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
US-10-457-982-2

Query Match      100.0%; Score 1263; DB 14; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGLTKLFICTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGLTKLFICTTGKLPVWPPTL 60

QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGVYQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTFSYGVQCFSRYPDHMKRHDFFKSAPEGVYQERTIFFKDDGNYKTRAEVKFEGDTLV 120

QY 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVYIMADKQNGIKVNFKIRHNIEDGSVQLAD 180
DB 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVYIMADKQNGIKVNFKIRHNIEDGSVQLAD 180

QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238

US-10-457-982-2
Query Match      100.0%; Score 1263; DB 16; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGLTKLFICTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGLTKLFICTTGKLPVWPPTL 60

QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGVYQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTFSYGVQCFSRYPDHMKRHDFFKSAPEGVYQERTIFFKDDGNYKTRAEVKFEGDTLV 120

QY 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVYIMADKQNGIKVNFKIRHNIEDGSVQLAD 180
DB 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVYIMADKQNGIKVNFKIRHNIEDGSVQLAD 180

QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238

US-10-757-624-2
; Sequence 2, Application US/10757624
; Publication No. US20040138420A1
; GENERAL INFORMATION:
; APPLICANT: Jones, Anne E.
; APPLICANT: Stubbs, Simon L. J.
; APPLICANT: Michael, Nigel P.
; APPLICANT: Thomas, Nicholas
; TITLE OF INVENTION: Fluorescent Proteins
; FILE REFERENCE: PA0111
; CURRENT APPLICATION NUMBER: US/10/757,624
; CURRENT FILING DATE: 2004-01-14
; PRIOR APPLICATION NUMBER: US 09/967,301
; PRIOR FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: GB 0109858.1
; PRIOR FILING DATE: 2001-04-23
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: Patent in version 3.2
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT

```

```

QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238

RESULT 9
US-10-724-178-2
; Sequence 2, Application US/10724178
; Publication No. US20040137528A1
; GENERAL INFORMATION:
; APPLICANT: Odysey Thera, Inc.
; APPLICANT: Michnick, Stephen
; APPLICANT: MacDonald, Marnie
; APPLICANT: Lamerdin, Jane
; TITLE OF INVENTION: FRAGMENTS OF FLUORESCENT PROTEINS FOR PROTEIN-FRAGMENT
; FILE REFERENCE: ODDY007
; CURRENT APPLICATION NUMBER: US/10/724,178
; CURRENT FILING DATE: 2003-12-01
; PRIOR APPLICATION NUMBER: US 60/461,133
; PRIOR FILING DATE: 2003-04-09
; NUMBER OF SEQ ID NOS: 1067
; SOFTWARE: Patent in version 3.0
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
US-10-724-178-2

Query Match      100.0%; Score 1263; DB 16; Length 238;
Best Local Similarity 98.7%; Pred. No. 7.4e-112;
Matches 235; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGLTKLFICTTGKLPVWPPTL 60
DB 1 MSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEDATYGLTKLFICTTGKLPVWPPTL 60

QY 61 VTTXSYGVQCFSRYPDHMKRHDFFKSAPEGVYQERTIFFKDDGNYKTRAEVKFEGDTLV 120
DB 61 VTTFSYGVQCFSRYPDHMKRHDFFKSAPEGVYQERTIFFKDDGNYKTRAEVKFEGDTLV 120

QY 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVYIMADKQNGIKVNFKIRHNIEDGSVQLAD 180
DB 121 NRIELKGIDFKEDGNILGHKLEYNNSHNVYIMADKQNGIKVNFKIRHNIEDGSVQLAD 180

QY 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238
DB 181 HYQONTPIGDGPVLLPDNHYLSTQSALSKDPNEKRDHMLXFTVTAAGITHGMDELYK 238

US-10-757-624-2
; Sequence 2, Application US/10757624
; Publication No. US20040138420A1
; GENERAL INFORMATION:
; APPLICANT: Jones, Anne E.
; APPLICANT: Stubbs, Simon L. J.
; APPLICANT: Michael, Nigel P.
; APPLICANT: Thomas, Nicholas
; TITLE OF INVENTION: Fluorescent Proteins
; FILE REFERENCE: PA0111
; CURRENT APPLICATION NUMBER: US/10/757,624
; CURRENT FILING DATE: 2004-01-14
; PRIOR APPLICATION NUMBER: US 09/967,301
; PRIOR FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: GB 0109858.1
; PRIOR FILING DATE: 2001-04-23
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: Patent in version 3.2
; SEQ ID NO 2
; LENGTH: 238
; TYPE: PRT

```


| Matches | 234; | Conservative | 4; | Mismatches | 0; | Indels | 0; | Gaps | 0; |
|---------|------|--|-----|------------|----|--------|----|------|----|
| Qy | 1 | MSKGEELFTGVVPIVLVDGDNVGHKFSVSGEGEGDATYGKLTUKEFTCTTGKLPVMPPTL | 60 | | | | | | |
| Db | 1 | MSKGEELFTGVVPIVLVDGDNVGHKFSVSGEGEGDATYGKLTUKEFTCTTGKLPVMPPTL | 60 | | | | | | |
| Qy | 61 | VTTXSYGVQCFSPRYPDHMKRHDFFKSSAMPEGYVQERTIFFKDDGNYKTRAEVKEGDTLV | 120 | | | | | | |
| Db | 61 | VTTLTLYGVQCFSPRYPDHMKRHDFFKSSAMPEGYVQERTIFFKDDGNYKTRAEVKEGDTLV | 120 | | | | | | |
| Qy | 121 | NRTELKIGDFKEDGNIILGHKLEYNNYNSHNVYIMADKQNGIKVNFKIRHNETDCKXVOLAD | 180 | | | | | | |
| Db | 121 | NRTELKIGDFKEDGNIILGHKLEYNNYNSHNVYIMADKQNGIKVNFKIRHNETDCKXVOLAD | 180 | | | | | | |
| Qy | 181 | HYQONTPIGDGPVLLPDNNHLYLSTOSALS KDPNEKRDMVLVLXFTVAAGITGMDLYK | 238 | | | | | | |
| Db | 181 | HYQONTPIGDGPVLLPDNNHLYLSTOSALS KDPNEKRDMVLVLXFTVAAGITGMDLYK | 238 | | | | | | |

```

RESULT 14
US-10-757-624-4
; Sequence 4, Application US/10757624
; Publication No. US20040138420A1
; GENERAL INFORMATION:
; APPLICANT: Stubbs, Simon L. J.
; APPLICANT: Jones, Anne E.
; APPLICANT: Michael, Nigel P.
; APPLICANT: Thomas, Nicholas
; TITLE OF INVENTION: Fluorescent Proteins
; FILE REFERENCE: PA0111
; CURRENT APPLICATION NUMBER: US/10/757,624
; CURRENT FILING DATE: 2004-01-14
; PRIOR APPLICATION NUMBER: US 09/967,301
; PRIOR FILING DATE: 2001-09-28
; PRIOR APPLICATION NUMBER: GB 0109858.1
; PRIOR FILING DATE: 2001-04-23
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 4
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic protein
US-10-757-624-4

```

RESULT 15
US-09-920-922-4
; Sequence 4, Application US/09920922
; Patent No. US20020083488A1
-; GENERAL INFORMATION:
-; APPLICANT: Miyawaki, Atsushi

```

; APPLICANT: Sawano, Asako
; TITLE OF INVENTION: METHOD FOR MUTAGENESIS
; FILE REFERENCE: 11293-012001
; CURRENT APPLICATION NUMBER: US/09/920,922
; CURRENT FILING DATE: 2001-08-02
; PRIOR APPLICATION NUMBER: JP 2000-237166
; PRIOR FILING DATE: 2000-08-04
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 238
; TYPE: PRT
; ORGANISM: Aequorea victoria
US-09-920-922-4

```

| | Query Match | 99.7%; | Score 1259; | DB 9; | Length 238; |
|----|-----------------------|---|---------------------|---------------|-------------------|
| | Best Local Similarity | 98.3%; | Pred. No. 1.8e-111; | | |
| | Matches 234; | Conservative | 4; | Mismatches 0; | Indels 0; Gaps 0; |
| Qy | 1 | MSKGEELFTGVPIILVELDGDVNGHKFSVSGEGEGDATYKGLTKLFCTTGTGKLPVMPPTL | 60 | | |
| Db | 1 | MSKGEELFTGVPIILVELDGDVNGHKFSVSGEGEGDATYKGLTKLFCTTGTGKLPVMPPTL | 60 | | |
| Qy | 61 | VTTXSYGVQCFSRYPDHMKRHDFFKSPAMPEGYVQERTIFFKDDGNYKTRAEVKPEGDTLV | 120 | | |
| Db | 61 | VTTFSYGVQCFSRYPDHMKQHDFKSPAMPEGYVQERTIFFKDDGNYKTRAEVKPEGDTLV | 120 | | |
| Qy | 121 | NRIELKGI DPKEGNTILGHKLEYNYNASHNYVIWADKQKNGIKYNFKIRHNIEDCKXVOLAD | 180 | | |
| Db | 121 | NRIELKGI DPKEGNTILGHKLEYNYNASHNYVIWADKQKNGIKYNFKIRHNIEDGSVQLAD | 180 | | |
| Qy | 181 | HYQONTPIGGPVLIPDNHLYLSTQSALSKDPNPKRDHMLVLLXFTVAAGITHGMDELXYK | 238 | | |
| Db | 181 | HYQONTPIGGPVLIPDNHLYLSTQSALSKDPNPKRDHMLVLLXFTVAAGITHGMDELXYK | 238 | | |

Search completed: January 3, 2005, 14:42:08
Job time : 146 secs